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ABSTRACT OF THE DISCLOSURE

A distributed authentication system includes a cryptography service node, and a client node interface coupled to a network authentication database, for providing automatic authentication to enable the client node to access network resources, such as applications or services, resident in one or more network server nodes. Authentication secrets corresponding to the network resources are each encrypted with a respective strong key and stored in the authentication database.

Authentication of the client node is accomplished with the retrieval of an authentication secret corresponding to a requested network resource. The retrieval process includes: i) decrypting the authentication secret using the strong key and encrypting the secret using a second key, and ii) sending a copy of the second key encrypted with a third key along with the encrypted secret to the requesting client node via a communication medium.